

Princeton university.

COLLEGE OF NEW JERSEY.



REQUIREMENTS FOR ADMISSION AND ESTIMATE OF EXPENSES.



JULY, 1890.

The edition of the College Catalogue for 1889-'90 is exhausted.
The Catalogue for 1890-'91 will be ready in November and will be
sent on application to the Registrar.

ADMISSION.

ENTRANCE EXAMINATIONS.

All entering students on their arrival must report at the President's house, and register. Examinations for admission will be written, with supplementary oral examinations if needed. The first examination will commence in Princeton, on Thursday, June 12th, at 11 A. M., and continue through the afternoon of Friday. The second will commence on Tuesday, September 16th, at 11 A. M., and continue through the afternoon of Wednesday. Applicants who have any conditions or other deficiencies from the June examination are required to remove them at this time. *Attendance is required at the beginning of the examinations.*

Simultaneously with the June entrance examinations in Princeton, examinations will also be held in the cities of New York, Philadelphia, Pittsburgh, Cincinnati, Louisville, Chicago, St. Louis, Omaha, Denver, San Francisco; and at preparatory schools and other cities when necessary. The precise places in which the examinations are to be held can be learned by application to the President. Due notice of these examinations will also be published in leading local newspapers for several weeks in advance.

Examinations at other times and places than those specified are inconvenient and often impracticable, and applicants for examination at other than the regular days are required to pay \$10 into the treasury.

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SUBJECTS.

Candidates for admission to the Freshman class are examined in the following books and subjects. It is recommended that the candidates be prepared for examination on the requirements as specified; but equivalents will be accepted.

English.

English Grammar—Whitney, or equivalent; Modern English History (1558–1880)—Gardiner, Anderson, or equivalent; U. S. History—Johnston, Scott, or equivalent.

The writing of a short essay may be required as a part of the examination; the theme for the essay of 1890 will be based on the life and writings of Prescott or of Bayard Taylor.

The attention of preparatory schools is called to the need of a more thorough study of elementary English; also, to the addition of Modern English History to the English entrance requirements.

Latin

Latin Grammar; especially the inflections; the simpler rules for composition and derivation of words; syntax of cases and verbs and structure of the sentence in general, with particular regard to relative and conditional sentences, indirect discourse and the subjunctive; so much prosody as relates to accent, quantity, versification in general, and dactylic hexameter. Caesar (five books of the Commentaries); Sallust (Catiline or Jugurtha); Virgil (six books of the *Æneid*); Cicero's Select Orations (six); Arnold's Latin Prose Composition (twelve chapters), or Jones' Exercises in Latin Prose; Geography of Ancient Italy.

Greek.

Greek Grammar, including prosody; Xenophon (four books of the *Anabasis*), or Greek Reader (Goodwin's), 111 pages; Homer (the first two books of the *Iliad*, except the Catalogue of Ships); Greek

Composition (Jones' Exercises in Greek Prose, or an equivalent—writing with the accents required); Geography of Ancient Greece and Asia Minor. Goodwin's Grammar is preferred. Special stress is laid upon a thorough knowledge of the noun and verb inflections. Candidates will do well to read an additional book of the Iliad, where this can be done without sacrifice of thoroughness in the formal requisitions. Some experience in giving written answers to set questions is advantageous.

The Continental pronunciation of the vowels and diphthongs is preferred in both Latin and Greek.

Mathematics.

Arithmetic, including the Metric system; Algebra, through quadratic equations involving two unknown quantities—including radicals, and fractional and negative exponents; Plane Geometry.

NOTE.

Candidates for admission to the next Freshman Class, Academic or Scientific, in 1890, will not be required to pass examination in Modern English History; and those applying for the same class, Academic Department, will not have to be prepared on the whole of Plane Geometry, but only on two books of Euclid, or an equivalent.

PRELIMINARY EXAMINATIONS.

At the examinations in June and September, candidates intending to enter the Freshman class one year later are admitted, on request, to examination on a portion of the subjects required for entrance. Unless in exceptional cases, either two of the four general subjects, English, Mathematics, Latin, Greek, must be offered entire: or such parts of at least three subjects as are here prescribed, viz.: in *English*, Grammar and either U. S. History or Modern English History; in *Mathematics*, Arithmetic, with the Metric system, and either Algebra, or Plane Geometry; in *Latin*, the full amount in Cæsar and one other author, with Grammar; in *Greek*, three books of the Anabasis, with Grammar.

In both Latin and Greek Grammar the examination will be upon noun and verb inflection, syntax of nouns and the simpler rules for syntax of verbs. This examination will be partial only, to be completed the following year.

REQUIREMENTS FOR ADMISSION TO HIGHER CLASSES.

Candidates for admission to the Sophomore class who have not completed the studies of the Freshman year at another College must first pass an examination on the studies required for admission to the Freshman class.

Candidates for admission to the Sophomore, Junior or Senior class, when coming from another College, are examined only in the studies of the year preceding that which they wish to enter, provided they present evidence that they have passed satisfactory examinations on the previous studies of the curriculum and entrance requirements, or their equivalents, excepting French, Anatomy, Botany and Zoology. Some knowledge of the studies just mentioned is desirable but examination is not required.

The studies of the Freshman year are Latin, Greek, Mathematics, English, Modern Languages, Anatomy. For admission to the Sophomore Class, candidates will be examined on the following minimum amounts or equivalents.

In Greek: Homer, books XVI, XVIII, XXII; Xenophon's Hellenica or Herodotus, 100 pages, half at least to be from Herodotus.

In Latin: Horace, Odes, two books; Livy, books I, XXI, XXII; Cicero, *de Senectute*; Roman History to the time of the Gracchi.

In Mathematics: Algebra completed; Plane and Solid Geometry.

In English: Trench's Study of Words; Hunt's Discourse, part I, or equivalents.

The studies of Sophomore year include the following required subjects: Latin, Greek, Mathematics, Modern Languages, English,

History, Logic, Chemistry. Zoology and Botany; and the following elective studies, of which two must be taken: Latin, Greek, Mathematics, French, German.

The required studies of Junior year are Psychology, English, Physics, Astronomy, Geology, and Political Economy, occupying eight hours a week throughout the year. Three elective studies, occupying six additional hours a week, are to be chosen from the departments of Mental Philosophy, Political Science and History, Classics, Modern Languages, Mathematics and Mathematical Sciences and Natural Sciences.

No person is admitted to the College as a candidate for the degree of Bachelor of Arts after the beginning of the first term of the Senior year.

All candidates for admission to any class, or as special students, must bring with them testimonials of good moral character and attainments, preferably from their last instructors, and if the candidate has been a member of another college or university, he must produce a certificate from its President or Faculty that he is free from censure in that institution.

No candidate is admitted into the College without examination and a vote of the Faculty.

Immediately after the opening of the College the entering students meet according to announcement for the registration of their names and subscription to the following pledge, required by the Board of Trustees:

We, the undersigned, do individually for ourselves promise, without any mental reservation, that we will have no connection whatever with any secret society, nor be present at the meetings of any secret society in this or any other college so long as we are members of the College of New Jersey; it being understood that this promise has no reference to the American Whig and Closophic Societies. We also declare that we regard ourselves bound to keep this promise and on no account whatever to violate it.

ADMISSION TO SPECIAL COURSES.

In exceptional cases, undergraduate students, not members of any one of the four regular classes nor candidates for a degree, are admitted to the privileges of the College, and allowed to take special courses, selected under the direction of the Faculty, in such a manner as to secure full and profitable employment of their time. Such special students undergo a preliminary examination sufficient to ascertain their preparation for the course proposed, and are subject to the same regulations and discipline and to the same examinations in the studies pursued, as other undergraduates. On completing their course they receive certificates of proficiency. These special courses, however, are not offered to those who have failed in the regular course.

J. C. GREEN SCHOOL OF SCIENCE.

ADMISSION.

ENTRANCE EXAMINATIONS.

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Examinations at other times and places than those specified are very inconvenient and often impracticable, and applicants for examination at other than the regular days are required to pay \$10 into the treasury.

At the examinations in June, candidates intending to enter the Freshman class one year later are admitted, on request, to examination on a portion of the subjects required for entrance.

Candidates for admission to the Freshman class must be at least sixteen years of age. They will be examined in the following books and subjects:

ENGLISH: Grammar—Whitney, or equivalent; U. S. History—Johnston, or equivalent; Modern English History—Gardiner or equivalent; Essay—the theme for 1890 will be based on the life of Prescott or of Sir Isaac Newton. The attention of preparatory schools is called to the need of a more thorough study of elementary English; also, to the addition of Modern English History to the English entrance requirements. MATHEMATICS: Arithmetic entire, including the Metric system, a practical knowledge of which is indispensable; Algebra, through quadratic equations involving two unknown quantities, including evolution, radicals, theory of exponents; Geometry—plane geometry entire (five books of Wentworth's or Chauvenet's Geometry or their equivalent). PHYSICAL GEOGRAPHY: The elements, as contained in Guyot's Grammar-School Geography.

MODERN LANGUAGES: either FRENCH or GERMAN at the option of the candidate. In either language the examination will be upon the general principles of grammar [French, Otto, pp. 28-201, or Whitney, pp. 27-202; German, Whitney, pp. 23-153 and 278-284; or Brandt, pp. 6-154; or Otto, Part I.; or Joynes-Meissner, pp. 19-177; or Huss, pp. 9-101 of the Theoretical Part,] and the ability to translate easy prose, such as, in French, the first fifty pages of *Lamartine's* *Graziella*, or of *G. Sand's* *La Mare au Diable*, or *Erckmann-Chatrian's* *Le Conserit*, or *Lacombe's* *Petite Histoire du Peuple Français*; or in German, either *Storm's* *Immensee*, or *Grimm's* *Märchen* (Otis' edition, pp. 61-109), or *Boisen's* *German Prose* (pp. 3-51).

Candidates for the degree of Bachelor of Science will be examined (in addition to the subjects above enumerated) in LATIN: Grammar, with special attention to parsing, and the retranslation from English into Latin of simple sentences of the First Book of *Cæsar*; Translation, *Cæsar* (five books of the Gallie War), *Cicero* (the four orations against *Catiline*), or equivalents from other Latin authors.

It is recommended that all candidates should receive instruction in free-hand drawing before their entrance.

OTHER REQUIREMENTS.

Candidates for admission to an advanced class will be examined in the studies previously pursued by the class they propose to enter.

All candidates for admission must bring satisfactory testimonials of good moral character and attainments, preferably from their last instructors, and if the candidate has been a member of another college, university, or similar institution, he must produce a certificate from its President or Faculty that he is free from censure in the same.

No candidate is admitted without an examination and a vote of the Faculty.

Immediately after the opening of the College the entering students meet according to announcement for the registration of their names and subscription to the following pledge, required by the Board of Trustees :

We, the undersigned, do individually for ourselves promise, without any mental reservation, that we will have no connection whatever with any secret society, nor be present at the meetings of any secret society in this or any other college so long as we are members of the College of New Jersey ; it being understood that this promise has no reference to the American Whig and Clisophie Societies. We also declare that we regard ourselves bound to keep this promise and on no account whatever to violate it.

COURSE IN ELECTRICAL ENGINEERING.

The Course in Electrical Engineering is designed to prepare those who pursue it to engage in any branch of engineering or technical work which demands a scientific knowledge of electricity. The course, or, more properly, that part of the course which is under the immediate control of the department, will occupy two years. This amount of time is so scanty when the wide extent of the field of study and the amount of practical work involved are taken into consideration, that a thorough knowledge must be required of every applicant for admission of those subjects which are essential to the successful prosecution of his work. The subjects required for admis-

sion are mathematics, including trigonometry, analytical geometry and the calculus; physics; and the elements of chemistry. Mathematics will be treated as a working instrument, of which the student has already acquired control, and no time during the course will be devoted to it. The same may be said of the French and German languages, although the applicant will not be examined on his knowledge of them.

Regular students of the School of Science who wish to enter this course may be admitted to it without examination at the beginning of their Senior year, and Academic students may enter at the same period if they have pursued the Junior Elective course in Mathematics.

The course will be conducted, on its theoretical side, on the basis of Mascart and Joubert's treatise. Following this will be the theory of electrical measurements and the various technical courses. These courses will embrace all the important applications of electricity in the arts;—the theory and construction of dynamo machines; systems of electric lighting; electric transmission of power; electro-chemistry and electro-metallurgy; telegraphy, telephony, etc.

The practical part of the course will commence with laboratory work in general physics, with special reference to the determination of force and energy relations, then will follow an extended course in electrical measurements and in electrical testing. Each of the technical courses will involve practical work which will, so far as possible, be laid out on a scale similar to that which is met with in actual practice.

To meet the requirements of this course there have been provided, in addition to the facilities afforded by the laboratories of the John C. Green School of Science, two buildings specially planned and constructed. One of them contains the necessary motive power and collection of dynamo machines, and the other contains every instrument of precision required in the most careful measurement of electrical quantities. This latter building stands apart from all other buildings, is entirely free from iron in its construction, and is so designed that galvanometers, electrometers, etc., are free from mechanical and magnetic disturbances. This building is connected by means of large conducting wires with the dynamo plant and

with the laboratories of the School of Science, so that its standard instruments are available at any time for standardizing the many measuring instruments which they contain.

The outfit of dynamo machines exhibits the various systems in commercial use on a scale comparable with that employed in actual practice.

PECUNIARY AID.

The College has for many years remitted, on application, the tuition of candidates for the ministry, of the sons of ministers, and also of other applicants who present satisfactory testimonials of good moral character and of more than ordinary intellectual ability, with the assurance that the aid requested is absolutely needed. No candidate for admission to College who is unexceptionable morally and intellectually will be refused admission because of inability to pay the charge for tuition.

In consequence of this liberal policy the amount of tuition remitted has increased until it is now more than double the entire income from the scholarship and charitable funds. If this policy is to be continued a large increase of these funds is urgently demanded. The Trustees have accordingly appointed a joint committee of members of the Board of Trustees and of the Faculty, to increase the Scholarship Fund to \$150,000. *This effort is commended to the attention and favor of the Alumni and other friends of the college.*

Although the charge for tuition, since the first scholarships were founded, has been advanced from \$60 to \$100, scholarships in the Academic department for the benefit of *candidates for the ministry, sons of ministers, or other students needing assistance*, may be founded by the payment of \$1000,—the scholarship to be designated as the donor may direct.

Scholarships may be founded by the payment of \$1,000, and designated as the donor may direct, the income from which will be accepted as payment of the tuition in the Academic department of *any student* to whom the donor may assign it, for *four years*—to be subsequently assignable by the Faculty.

Application for scholarships, or for aid from the charitable funds, should be made to Professor J. T. Duffield.

EXPENSES.

The following is the Schedule of the College expenses for 1889-1890.

Board, 36 weeks	\$ 3.00 to \$7 per week.
Washing, 36 weeks.....	50 cents per week.
Tuition, Academic.....	100.00 per annum.
Tuition, School of Science	120.00 per annum.
Tuition, Special course in Analytical Chem- istry	120.00 per annum.
Tuition, extra for Laboratory Chemistry, Senior elective	18.00 per annum.
Room rent (according to location of rooms)	30.00 to \$175 per annum.
Fuel deposit (according to location of rooms)	17.00 to \$26 per annum.
Gas deposit (according to location of rooms)	24.00 to \$42 per annum.
Servants and Public Rooms (Library, Gym- nasium, Museums, etc.).....	40.00 per annum.
Matriculation Fee, payable on entrance	5.00
Graduation Fee, payable third term, Senior year	12.00

For other special courses than that in Analytical Chemistry arrangements may be made upon consultation with the Professor in charge.

The charges for fuel and gas are approximations based upon the greatest amount used. An account of the actual consumption is kept with each room, and the exact charge is adjusted at the end of the year. The charge for fuel includes the cost of kindling, and the labor of carrying coal, making fires, etc.

Apparatus Deposits.—Students pursuing certain courses in the School of Science are required to make deposits to pay for apparatus injured or destroyed. At the end of the term any excess in favor of the student is placed to his credit on the bill for next session. The deposits in the courses for B.S. are:—Sophomores, first term, \$12; second term, \$12; Juniors taking any work in chemical analysis, second term, \$12; Seniors electing the course in Chemistry and Mineralogy, first term, \$15; second term, \$10; other Seniors taking any work in chemical analysis, first term, \$12. The deposits in the course for C.E., all payable in the first term, are:—Freshmen, \$3; Juniors, \$6; Seniors, \$4; all of the foregoing being for apparatus in the Engineering Department; also, Sophomores, \$5 for the Engineering Department, and \$12 for blowpipe apparatus. Academic Seniors, electing Laboratory Chemistry, will deposit \$5, payable in the first term.

ESTIMATES OF ANNUAL EXPENSES.

ACADEMIC DEPARTMENT.

Attention is specially called to the following approximate estimate of the necessary annual expenses for a student occupying an unfurnished room in College, without including clothes, traveling or vacation expenses:

	Min.	Medium.	Max.
Board, 36 weeks, at \$3.00 to \$7.00.....	\$108.00	\$180.00	\$252.00
Washing, 36 weeks, at 50 cents per week.....	18.00	18.00	18.00
Tuition and Public Room Fees.....	140.00	140.00	140.00
Matriculation Fee (on Entrance)	5.00	5.00	5.00
Room Rent.....	30.00	60.00	175.00
Fuel	10.00	20.00	30.00
Gas		10.00	25.00
Total....	\$311.00	\$433.00	\$645.00
Deduct for Students on Scholarships	100.00		
See page 140.			
	\$211.00		
Approved Candidates for Ministry	30.00		
	\$181.00		

